

What is claimed is:

1. A method for generating broadcast music comprising the steps of:  
generating a music data file;  
broadcasting the music data file from a base station to one or more of a plurality of  
5 nodes;  
receiving the music data file at one or more of the plurality of nodes;  
extracting musical definition data from the music data file, wherein the musical  
definition data provides information regarding a song data structure and data for musical  
parameters in accordance with the song data structure;  
10 processing the musical definition data, wherein a song in accordance with the song  
data structure and the musical parameters is generated by the one or more of the plurality of  
nodes; and  
playing the generated song at the one or more of the plurality of nodes.
2. A system for generating a musical composition based on received music data  
15 file, comprising:  
a transmitter/receiver, wherein the transmitter/receiver transmits and receives data  
from/to one or more second systems remote from the system, wherein the data received by the  
system includes at least a music data file;  
a music generation device, wherein the music generation device executes at least a  
20 music generation algorithm, wherein musical rules are applied to musical data in accordance  
with the music generation algorithm to generate music output for one or more musical  
compositions;  
a memory, wherein at least the received music data file is stored in the memory;  
wherein, musical data is generated based on data from the received music data file,  
25 wherein the music generation device generates the musical composition based on the received  
music data file.
3. The apparatus of claim 2, further comprising a user input, wherein activation  
of the user input by a user causes data in the received music data file to be modified, wherein  
a modified music data file is created, wherein the music generation device generates a  
30 modified musical composition based on the modified data file.
4. The apparatus of claim 3, wherein the modified data file is transmitted by the  
transmitter/receiver for reception by one or more remote systems, wherein the one or more

remote systems may generate the modified musical composition based on the modified data file.

5           5.       The apparatus of claim 2, wherein the music data file is transmitted as part of initiating a telephone call.

6           6.       The apparatus of claim 2, wherein the music data file is transmitted as part of a telephone call.

7.       A method of performing audio synthesis in a portable environment, wherein source sample data is processed by a processing unit to generate synthesized audio samples, the method comprising the steps of:

10           providing an interpolation function wherein source monaural sample data is accessed and interpolated to generate one or more interpolated monaural samples based on the source monaural sample data;

          providing a filter function wherein at least one of the interpolated monaural samples is filtered to generate a filtered interpolated monaural sample;

15           providing a gain function wherein the filtered interpolated monaural sample is processed to generate at least a left and a right sample; wherein the left and the right sample together may subsequently process to create a stereophonic field.

8.       A method of performing MIDI-based synthesis in a portable environment, wherein a MIDI synthesis function is called to process MIDI events by accessing a reduced-  
20       footprint soundbank to generate audio output, the method comprising the steps of:

          providing a DLS-compatible soundbank comprised of two levels for a first desired sound;

          wherein a first level is associated with a first sample comprised of the initial sound of impact, and a second level is associated with at least a second sample comprised of a looping  
25       period of a stable waveform;

          providing parameter data associated with the DLS-compatible soundbank relating the first sample to the first desired sound and to a plurality of additional sounds; and

          wherein the DLS-compatible soundbank and associated parameter data occupy a smaller footprint than otherwise would be occupied if the first sample were not related to the  
30       additional plurality of additional sounds.